UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
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ART UNIT	PAPER NUMBER
2667	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/977,438	XU ET AL.
	Examiner	Art Unit	
	Anh-Vu H. Ly	2667	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

    1.☐ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____ .

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/31/02;9/13/02*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

Information Disclosure Statement

1.   The information disclosure statement filed September 13, 2002 fails to comply with 37

CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-

patent literature publication or that portion which caused it to be listed; and all other information

or that portion which caused it to be listed. It has been placed in the application file, but the

information referred to therein has not been considered.

Claim Objections

2.   Claims 7, 15, 17, 19, 23-25, 27, and 28 are objected to because of the following

informalities:

        With respect to claim 7, in line 8, "the first media datagram" lacks antecedent basis.

        With respect to claim 15, in lines 7-8, "a media datagram" should be changed to - -a first

media datagram" and in lines 10-11, "a media datagram" should be changed to - -a second media

datagram- - to be consistent with third and fourth media datagrams being recited in lines 13 and

16. Further, by amending claim 15 to recite a first and a second media datagram would eliminate

lacking antecedent issues, "the first media datagram" and "the second media datagram" as

recited in dependent claims 16, 17, and 19. Further, step III as recited in line 16 should be

changed to step IV since step III already occurred in line 13.

        With respect to claims 17, 19, 23-25, 27, and 28, in line 1, "the media data application"

lacks antecedent basis.

        Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1-2 and 15-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Ju et al

(US Patent No. 6,697,377 B1). Hereinafter, referred to as Ju.

With respect to claim 1, Ju discloses a method of communicating real time media data

between a first client and a second client (Fig. 7), the method comprising:

a) extracting a first client source network address from a first media datagram originated

by the first client (col. 10, lines 24-35 – Herein, the IP address and port number of the first

device are extracted and replaced with the IP address and port number of the TAT as the source

IP address and port number before sending the RTP frames to the second device. RTP frames

transmitted from the first client to the TAT considered as first media datagram);

b) extracting a second client source network address from a second media datagram

originated by the second client (col. 10, lines 36-47 – Herein, the IP address and port number of

the second device are extracted and replaced with the IP address and port number of the TAT as

the source IP address and port number before sending RTP frames to the first device. RTP

frames transmitted from the second client to the TAT considered as second media datagram);

c) sending a third datagram to the first client source network address, wherein the third media datagram includes media data received from the second client (col. 10, lines 40-47 - once RTP frames are received from the second device, frames are then sent by the TAT to the first device which including IP address and port number of the TAT and the IP address and port number of the first device. RTP frames transmitted from TAT to first client considered as third media datagram); and

d) sending a fourth media datagram to the second client source network address, wherein the fourth media datagram includes media data received from the first client (col. 10, lines 28-35 - once RTP frames are received from the first device utilizing the RTP routing 158, the frames are sent by the TAT to the second device utilizing RTP routing 164 which is the routing used for sending RTP frames from the TAT to the second device. RTP routing 164 includes the IP address and port number of the TAT and the IP address and port number of the second device that are used for RTP routing 164. RTP frames transmitted from TAT to the second client considered as fourth media datagram).

With respect to claims 2 and 16, Ju discloses that wherein:

a) the first client source network address comprises an IP address of a firewall server supporting the first client (col. 5, lines 24-28 and Fig. 3b, element 28, since the client 14o is behind the firewall server and/or NAT, its public IP address and port will be the public IP address and port of the firewall server and/or NAT);

b) the second client source network address comprises an IP address of a firewall server supporting the second client (col. 5, lines 24-28 and Fig. 3b, element 28, since the destination

14d is also behind the firewall server, its public IP address and port will be the IP address and port of the firewall server and/or NAT);

c) the step of sending a third media datagram to the first client source network address includes sending the third media datagram to a port number extracted from the first media datagram (col. 10, lines 40-44 - once RTP frames are received from the second device, frames are then sent by the TAT to the first device which including IP address and port number of the TAT and the IP address and port number of the first device. Herein, the port number of the first device is the port number as extracted in first media datagram and recorded in Fig. 8).

d) the step of sending a fourth media datagram to the second client source network address includes sending the fourth media datagram to a port number extracted from the second media datagram (col. 10, lines 28-33 - once RTP frames are received from the first device utilizing the RTP routing 158, the frames are sent by the TAT to the second device utilizing RTP routing 164 which including IP address and port number of the TAT and IP address and port number of the second device. Herein, the port number of the second device is the port number as extracted in second media datagram and recorded in Fig. 8).

With respect to claim 15, Ju discloses a device (Fig. 3b, element 36o and 36d) for relaying real time media data between a first client (Fig. 3b, element 14o) and a second client (Fig. 3b, element 14d), the device comprising:

a) a network interface for communicating with each of the first client and the second client via a data network (Fig. 6, element 54);

b) a media communication application (Fig. 6, element 46) operatively coupled to the

network interface circuit for:

i) extracting a first client source network address from a first media datagram originated

by the first client and received by the network interface circuit (col. 10, lines 24-35 - Herein, the

IP address and port number of the first device are extracted and replaced with the IP address and

port number of the TAT as the source IP address and port number before sending the RTP

frames to the second device);

ii) extracting a second client source network address from a second media datagram

originated by the second client and received by the network interface circuit (col. 10, lines 36-47

- Herein, the IP address and port number of the second device are extracted and replaced with the

IP address and port number of the TAT as the source IP address and port number before sending

RTP frames to the first device);

iii) driving the network interface circuit to send a third datagram to the first client source

network address, wherein the third media datagram includes media data received from the

second client (col. 10, lines 40-47 - once RTP frames are received from the second device,

frames are then sent by the TAT to the first device which including IP address and port number

on the TAT as the source IP address and port number and the IP address and port number on the

first device as the destination IP address and port number); and

iv) driving the network interface circuit to send a fourth media datagram to the second

client source network address, wherein the fourth media datagram includes media data received

from the first client (col. 10, lines 28-35 - once RTP frames are received from the first device

utilizing the RTP routing 158, the frames are sent by the TAT to the second device utilizing RTP

routing 164 which is the routing used for sending RTP frames from the TAT to the second

device. RTP routing 164 includes the IP address and port number on the TAT and the IP address

and port number on the second device that are used for RTP routing 164).

4.   Claims 7-14 and 21-28 are rejected under 35 U.S.C. 102(e) as being anticipated by

Kennedy et al (US Pub 2004/0252683 A1). Hereinafter, referred to as Kennedy.

With respect to claim 7, Kennedy discloses a method for communicating real time media

data between a first client and a second client (Fig. 1), the method comprising:

a) receiving a first media data originated by the first client (page 3, 33rd paragraph and

Fig. 2, step 202 – the application server 105 obtains the IP source address and port from the

header of the message sent by the client 101 to the application server);

b) receiving a second media data originated by the second client (page 3, 33rd paragraph

and Fig. 2, step 202 – the application server 105 obtains the IP source address and port from the

header of the message sent by the client 103 to the application server);

c) receiving an indication of a first client network address (page 3, 33rd paragraph and

Fig. 2, step 201 – a client 101 sends their internal IP address and port to the application server

105);

d) comparing an Internet Protocol address of the first client network address to an

Internet Protocol address of the first client source network address extracted from the first media

datagram (page 3, 33rd paragraph and Fig. 2, step 203 – the application server 105 determines

whether the internal IP address and port sent by the client 101 matches the IP source address and

port that the application server 105 extracted from the header of the message originated by the client 101);

e) sending a third media datagram that includes media data originated by the second client using the first client source network address as a destination network address of the third media datagram if the first client network address and the source network address are not the same (page 3, 37th paragraph – if it is determined that none of the clients 101 and 103 are behind a NAT, herein, it's already determined that the internal IP address and port does not match the IP source address and port, the application server 105 makes a determination that no address resolution is necessary in order for the clients 101 and 103 to communicate. In this scenario, client A 101 and client B 103 can communicate through their respective public addresses 102 and 104. This implies that the IP source addresses and ports of the clients are used as the destination network addresses and ports since none of the clients are behind the NAT).

With respect to claims 8, 12, 22, and 26, Kennedy discloses that wherein:

i) the first client source network address comprises an IP address of a firewall server supporting the first client (Fig. 4, element 403); and

ii) the step of sending a third media datagram includes sending the third media datagram to a port number extracted from the first media datagram (page 3, 37th paragraph – if it is determined that none of the clients 101 and 103 are behind a NAT, internal IP address and port does not match the IP source address and port, the application server 105 makes a determination that no address resolution is necessary in order for the clients 101 and 103 to communicate. In this scenario, client A 101 and client B 103 can communicate through their respective public

addresses 102 and 104. This implies that the IP source addresses and ports of the clients, as

extracted by the application server, are used as the destination network addresses and ports since

none of the clients are behind the NAT).

With respect to claims 9-10, 13-14, 23-24, and 27-28, Kennedy discloses including

establishing a first port number for receipt of the first media datagram and providing an

indication of the first port number to the first client (page 4, 46th paragraph – application server

105 sends a message to client A 101 behind NAT A 602 telling client A 101 to being sending a

first special message to a first address and port of the application server 105 that is not behind a

NAT); and wherein the third media datagram includes the first port number as a source port

number (Fig. 1 illustrates control messages being exchanged between the application server 105

and client A 101; therefore, a message sending from the application server 105 to the client 101

will have the application server IP address and port number as the source IP address and port

number).

With respect to claims 11 and 25, Kennedy discloses sending a third media datagram

includes media data originated by the second client using the first client network address as a

destination network address of the third media datagram if the first client network address and

the first client source network address are the same (Fig. 8 illustrates sending media data using

the first client network address as a destination network address after determining that both

nodes of a session are behind the same NAT whereby first client network address and port

matches first client source network address and port).

With respect to claim 21, Kennedy discloses a device for relaying real time media data

between a first client and a second client (Fig. 1), the device comprising:

a) a network interface circuit for communicating with each of the first client and a second

client via a data network (Fig. 14, element 1413);

b) a media communication application (Fig. 14, element 1403) operatively coupled to the

network interface circuit for :

i) obtaining a first media data originated by the first client and received by the network

interface circuit (page 3, 33rd paragraph and Fig. 2, step 202 – the application server 105 obtains

the IP source address and port from the header of the message sent by the client 101 to the

application server);

ii) obtaining an indication of a first client network address for use as a destination

network address for sending media datagram to the first client (page 3, 33rd paragraph and Fig. 2,

step 201 – a client 101 sends their internal IP address and port to the application server 105);

iii) obtaining a second media data originated by the second client and received by the

network interface circuit (page 3, 33rd paragraph and Fig. 2, step 202 – the application server 105

obtains the IP source address and port from the header of the message sent by the client 103 to

the application server);

iv) comparing the first client network address to a first client source network address

extracted from the first media datagram (page 3, 33rd paragraph and Fig. 2, step 203 – the

application server 105 determines whether the internal IP address and port sent by the client 101

matches the IP source address and port that the application server 105 extracted from the header

of the message originated by the client 101);

v) driving the network interface circuit to send a third media datagram that includes

media data originated by the second client using the source network address as a destination

network address of the third media datagram if the first client network address and the source

network address are not the same (page 3, 37th paragraph – if it is determined that none of the

clients 101 and 103 are behind a NAT, internal IP address and port does not match the IP source

address and port, the application server 105 makes a determination that no address resolution is

necessary in order for the clients 101 and 103 to communicate. In this scenario, client A 101 and

client B 103 can communicate through their respective public addresses 102 and 104. This

implies that the IP source addresses and ports of the clients are used as the destination network

addresses and ports since none of the clients are behind the NAT).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or
> described as set forth in section 102 of this title, if the differences between the subject
> matter sought to be patented and the prior art are such that the subject matter as a whole
> would have been obvious at the time the invention was made to a person having ordinary
> skill in the art to which said subject matter pertains. Patentability shall not be negatived
> by the manner in which the invention was made.

5.   Claims 3-6 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ju

et al (US Patent No. 6,697,377 B1) in view of Fangman et al (US Pub 2002/0141389 A1).

Hereinafter, referred to as Ju and Fangman.

With respect to claims 3, 5, 17, and 19, Ju discloses the method of communicating real

time media data (Fig. 7), further including:

a) establishing a first port number for receipt of the first media datagram (col. 9, line 67 –

col. 10, line 2, the IP address and port number used by the TAT for such Q.931 connection with

the first device);

b) establishing a second port number for receipt of the second media datagram (col. 10,

lines 5-6, the IP address and port number used by the TAT for such Q.931 connection with the

second device); and

wherein the third media datagram includes the first port number as a source port number

(col. 10, lines 40-47 - once RTP frames are received from the second device, frames are then sent

by the TAT to the first device which including IP address and port number on the TAT and the

IP address and port number on the first device. Herein the first port number of the TAT is the

source port number of the third media datagram); and the fourth media datagram includes the

second port number as a source port number (col. 10, lines 28-35 - once RTP frames are received

from the first device, the frames are sent by the TAT to the second device which including the IP

address and port number on the TAT and the IP address and port number on the second device.

Herein, the second port number of the TAT is the source port number of the fourth media

datagram).

Ju does not disclose providing an indication of the first port number to the first client and

providing an indication of the second port number to the second client. Fangman discloses that

providing an indication of the first port number to the first client and providing an indication of

the second port number to the second client (Fig. 4B, step 452). It would have been obvious to

one having ordinary skill in the art at the time the invention was made to include the feature of

providing an indication of the assigned ports to be used by the clients in Ju's system, as

suggested by Fangman, to control and manage the network ports efficiently and effectively.

With respect to claims 4, 6, 18, and 20, Ju discloses that wherein the first port number

and the second port number are the same (Fig. 8, call #1, col. 150 and 152).

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Benchetrit et al (US Pub 2003/0065817 A1) discloses extended IP network address

translation system.

Kim (US Patent No. 6,925,487 B2) discloses system and method for exchanging online

information over private network.

Read (US Pub 2004/0037268 A1) discloses audio-video telephony with firewalls and

network address translation.

March et al (US Pub 2003/0007486 A1) discloses network address and/or port

translation.

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Anh-Vu H. Ly whose telephone number is 571-272-3175. The

examiner can normally be reached on Monday-Friday 7:00am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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